



Quality of Life and Military Outcomes: A Conceptual Framework and Suggestions for Planned Research

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Quality of Life and Military Outcomes: A Conceptual Framework and Suggestions for Planned Research

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13. ABSTRACT (Maximum 200 words) This report presents a conceptual framework and suggestions for a planned study of quality of life (QOL) and military outcomes among Navy personnel. The conceptual framework links individual variables (e.g., age, marital status, and Navy paygrade) and contextual Navy variables (e.g., command) with two conceptions of subjective QOL: satisfaction with particular domains in one's life (e.g., marriage and job) and global life satisfaction. A number of facets of life domains are identified, including overall satisfaction, satisfaction with aspects of the domain, centrality of the domain, and perceived relevance of the Navy to domain satisfaction. QOL needs in a given domain are represented as the interaction of domain satisfaction and centrality. Additional contributors to life satisfaction are recent experiences of satisfaction and dissatisfaction within life domains, the degree to which individuals' personal characteristics fit the Navy environment, and personal dispositions such as optimism. Three types of person-level military outcomes are considered: retention, job performance, and readiness. These outcomes are related to global and domain satisfaction and to person-environment fit. One section of the report lists expectations derived from the conceptual framework; another presents specific research recommendations.				
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Foreword

This technical note presents a conceptual framework and suggestions for a study of quality of life (QOL) and military outcomes among Navy personnel. This work contributed to the development of the Quality of Life Predictive Model project. The information summarized in this report was used to develop a survey assessing QOL factors and their impact on military outcome variables and a conceptual model of Navy QOL.

The report was prepared during the summer of 1992, when the author was an American Society for Engineering Education Summer Faculty scientist at the Navy Personnel Research and Development Center. Dr. Wicker is a member of the faculty of the Center for Organizational and Behavioral Sciences at The Claremont Graduate School.

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Summary

Background and Purpose

The Navy has spent large amounts of money to provide services and resources that are believed to make Navy life more attractive, and indirectly, its forces more effective. To date, however, there has been no comprehensive study of the life satisfactions of Navy members and how these satisfactions are related to military outcomes. This report presents a conceptual framework that can be used as a guide for planning such an investigation. The present concern is with subjective quality of life (QOL), that is, members' reports of satisfaction with aspects of their lives and with their lives overall.

Individual and Contextual Factors

The conceptual framework considers the potential influences of both individual and contextual factors on subjective QOL and related needs. Individual factors are properties attached to persons, such as age, sex, marital status, and Navy paygrade. Contextual factors are properties that reflect people's organizational memberships, such as their Navy command.

Life Satisfaction

Two distinct conceptions of life satisfaction are incorporated in the conceptual framework: satisfaction with particular domains of one's life (life domain satisfaction) and satisfaction with life as a whole (global life satisfaction). Among the nine domains included are marriage or intimate relationship, standard of living, and personal development. The framework incorporates a number of facets applicable to each domain, including overall domain satisfaction, satisfaction with important aspects of the domain, centrality of the domain, and perceived relevance of the domain to military outcomes.

Some researchers have assumed that global life satisfaction is a standard against which domain satisfactions should be measured. However, it is more appropriate to regard the two kinds of satisfactions as reflecting somewhat different concepts, and as having different advantages and disadvantages. Measures of global satisfaction are simpler, and more readily compared with other studies. Measures of domain satisfactions, being more specific, are more useful for policy-related research and needs analyses, and they are more likely to be associated with organizational outcomes.

In the present conception, life domain needs are a function of overall satisfaction with the domain and domain centrality. Maximal need exists when overall satisfaction with a domain is low and the domain is important and salient.

Additional Considerations

According to the framework presented here, the following additional variables affect life satisfactions: recently experienced satisfactions and dissatisfactions within various life domains, the degree to which the individual's personal characteristics are compatible with the demands and opportunities of his or her organizational environment, and enduring personal dispositions.

Military Outcomes

The Navy's ability to carry out its mission depends on whether it has the needed personnel, and whether its members can competently perform their duties and respond to rapid deployments and other urgent situations. At the level of the individual member, these conditions are represented by retention (completion of current enlistment and reenlistment), job performance, and personal readiness. Each of these military outcomes is represented in the conceptual framework. Measures of these outcomes can range from relatively objective, such as the act of reenlisting, to relatively subjective, such as self-ratings of job performance. Generally speaking, the use of multiple measures of outcomes is desirable.

Recommendations

Suggestions for the survey of subjective QOL and military outcomes include the following:

1. The survey should be based on an explicit conceptual framework such as the one presented in this report.
2. The contributions of individual variables and contextual variables to subjective QOL should be examined.
3. If the Navy sponsor of this project intends to obtain projections of the demographic composition of the Navy at certain times in the future, the individual variables that are represented in those projections should be included in the forthcoming survey.
4. If possible, data on individual and contextual factors and on military outcomes should be obtained from Navy records to supplement and validate survey data.
5. For each life domain to be studied, measures should be developed for each facet of life domains satisfaction specified in the conceptual framework. These measures should be used to test expectations derived from the framework.
6. The relationship of global life satisfaction with the variables reflecting facets of life domain satisfaction should be examined.
7. Measures of the following variables and dissatisfying recent events, perceived fit of oneself with the Navy environment and personality traits, such as optimism, should be developed or selected and their contributions to life satisfactions examined.
8. A variety of ways of combining survey and other data to predict military outcomes should be explored. The analyses should include examination of a model that represents outcomes as a function of domain satisfaction, centrality of the domain, and perceived relevance of the domain to the outcome.

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Introduction

Background and Purpose

Over the past two decades, Navy planners have had to grapple with a wide array of personnel issues: adapting to an all volunteer force; recruiting, training, and equipping members; providing facilities and services for a force that included increasing numbers of women, married members, and dependent children; and more generally, preserving and enhancing quality of life (QOL) for members and their families.

The Navy has spent large amounts of money to provide services and resources that are believed to make Navy life more attractive, and indirectly, its forces more effective. To date, however, there has been no comprehensive study of the life satisfactions of Navy members and how these satisfactions are related to military outcomes. Such research can be useful in a number of ways. From properly designed studies that examine QOL and outcomes, policy makers can identify areas of dissatisfaction and need for various groups. They can make more informed resource allocations and evaluate alternative strategies for meeting group and organizational needs. Repeated assessments of QOL allow policy makers to identify trends in satisfaction and need, some of which may be associated with organizational and societal changes (Milbrath, 1979). Coupled with analyses of demographic trends, QOL data can be used to project future needs for various groups of members. Given current reductions in force and closing of some naval facilities, this is an opportune time to conduct such research. In times of change, it is particularly desirable to know the sentiments of members who will be affected by decisions and to be able to forecast needs of tomorrow's forces.

The present report is part of a larger program of research designed to provide QOL information to policy makers. The research program comprehensively assesses QOL in the Navy and analyzes its relationship to military outcomes. Previous reports have reviewed the literature on QOL (Kerce, 1992), human needs (Rosenfeld, Culbertson, and Magnusson, 1992), and military outcomes (Glaser & Dutcher, 1994). A future report will present results of a Navy-wide QOL survey.

Objectives

This report presents a conceptual framework that can be used as a guide in planning the Navy QOL survey. It has the following objectives:

1. To identify major life concerns of Navy personnel (e.g., their jobs, their families, and their standard of living).
2. To consider the relationship of these life concerns with global life satisfaction.
3. To identify characteristics of Navy members (e.g., gender, marital status, rate or rank) and of their social contexts (e.g., command or assignment location) that may be related to different patterns of life satisfaction and QOL needs.
4. To identify conditions in the larger social world (e.g., economic trends) and Navy-wide events (e.g., restructuring) that also affect QOL.
5. To relate various life satisfaction indicators with military outcomes (e.g., job performance and retention).

6. To identify several alternative procedures for analyzing the relationship between life satisfactions and military outcomes.

7. To provide a foundation for developing a predictive model database for forecasting QOL needs of various subgroups of Navy members (e.g., single parents).

Some Basic Definitions and Distinctions

This paper concerns people's reports of satisfaction with aspects of their lives and with their lives overall. The term, *subjective QOL*, and the abbreviation, SQL, will be used to refer to such assessments. Other terms used in the literature include subjective well-being, happiness, and life satisfaction.

To further sharpen the definition of SQL, several additional distinctions are noted. In this report we are concerned with self-reported, and not externally assessed, or objective, QOL. Statements of one's satisfaction or dissatisfaction are taken at face value, without regard for the actual levels of resources available to the person. Although some researchers ask respondents to report both feelings and satisfaction, the two kinds of measures produce similar results. A single measure is sufficient for most applied work (Andrews & Robinson, 1991, p. 105); the present choice is satisfaction. This report retains the common distinction between satisfaction with life *domains* (e.g., marriage and job) and *global life* satisfaction (i.e., with life overall). People typically report greater satisfaction with some domains than others, and their global satisfaction cannot be fully accounted for by satisfaction with the dozen or so domains about which researchers usually ask (Andrews & Robinson, 1991, p. 69).

The following question can appropriately be raised when SQL research is to be used for organizational analysis and planning: Can responses on SQL measures reasonably be interpreted as indicators of the needs of respondents, or should separate need assessment instruments be developed? The position taken here is that separate needs measures are not necessary if a survey includes measures of both domain centrality (importance and salience) and domain satisfaction. A group that reports relatively low satisfaction, with a life domain that is important and salient to that group, can be construed as having a need in that domain. For example, if people in a given location are dissatisfied with housing relative to people in other locations, and if the group reports that housing is important and salient to them, they can be said to have a housing need. However, if the group did not regard housing as important or salient, their relatively low satisfaction would not reflect a strong need. In the present conception, then, needs are subjectively, rather than objectively defined.

Overview of the Conceptual Framework

A simplified sketch of the conceptual framework developed for this report is presented in Figure 1. A more detailed figure appears later in the report.

Starting at the right of the figure, military outcomes are portrayed as being influenced by global life satisfaction and satisfaction with particular life domains, such as job and housing. The arrows connecting these variables indicate that each type of satisfaction is independently and directly linked with outcomes.

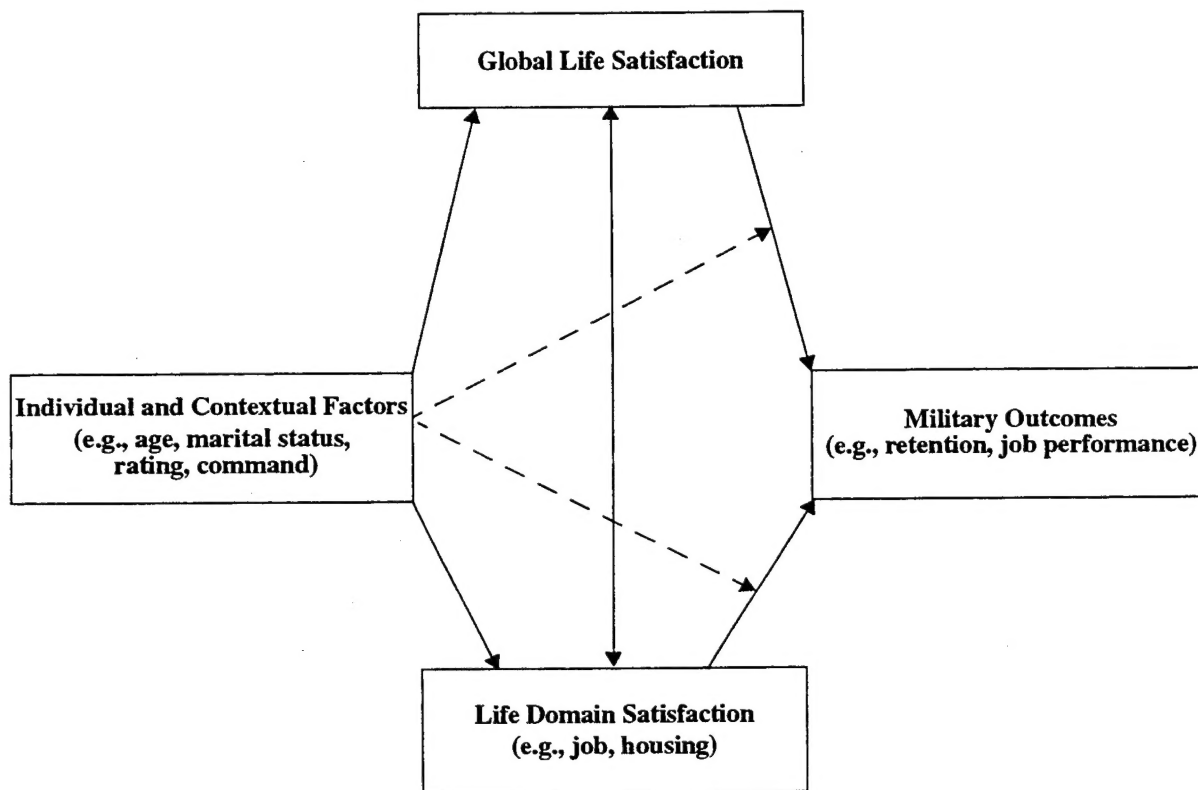


Figure 1. Simplified sketch of the conceptual framework.

Global life satisfaction and satisfaction with life domains are expected to be related. Neither variable is assumed to be the cause of the other, however. Global and domain satisfaction are viewed as mutually influential, and both may be influenced by other variables not part of the model.

As shown at the left of the figure, global and domain satisfaction are related to two kinds or levels of factors. Most traditional demographic categories (e.g., age and sex) represent *individual factors*—they are properties of single individuals. But people can also be characterized according to their membership in organizational or other social units (e.g., their command and geographical location)—these are *contextual factors*. Researchers have frequently examined the contributions of individual factors to SQL. For example, life satisfaction has been reported to increase with age (e.g., Andrews & Withey, 1976). Researchers typically do not relate SQL to contextual factors that represent social units smaller than entire countries (Mastekaasa & Moum, 1984). However, it is likely that satisfactions for some life domains are greater in certain organizational units than others.

In addition to their links to life satisfactions, individual and contextual factors may moderate relationships between satisfactions and outcomes. That is, the nature of satisfaction-outcome relationships may be different for different subgroups. For example, global life satisfaction and retention may be more strongly related among older members than among younger members. Similarly, the relationship between housing satisfaction and retention may be different for members stationed in San Diego and in Norfolk. The moderating effects of individual and contextual factors are represented in Figure 1 by dashed arrows.

All of the factors represented in Figure 1 exist within a larger social world whose dynamics can have profound effects upon them. These dynamics include political, economic, military, technological, and social conditions and events. For example, international political events such as the Iraqi invasion of Kuwait and the subsequent initiation of Operation Desert Shield and Operation Desert Storm affect duty assignments and life satisfactions. The end of the Cold War and the current slow recovery from recession have contributed to decisions to downsize the Navy. These political, economic, and military developments also have effects on life satisfactions and on military outcomes, such as members' intentions to reenlist.

The concepts represented in Figure 1 are further discussed in the following sections, beginning with individual and contextual factors.

Individual and Contextual Factors

General Considerations

Most standard demographic categories reflect properties of individuals (e.g., age, sex, ethnic group) or of their status relative to family members (e.g., marital status and parenthood). Although these characteristics indisputably affect people's life experiences, they are not strongly correlated with life satisfaction. In numerous studies, researchers have found that demographic variables account for very little of the variance in SQL measures (e.g., Chatters & Jackson, 1989, p. 207). For example, groups that have been discriminated against historically, such as ethnic minorities and women, typically report the same average levels of life satisfaction as other groups.

The absence of relationships between demographic variables and SQL in representative U.S. populations might not necessarily generalize to the Navy population, however. In comparison to the general population, the Navy has more males, and its members are younger and healthier. Results of a pilot study of 132 Navy enlisted personnel, however, indicated only chance relationships between 9 of 10 individual measures, including age, education, and parenthood, and a composite SQL measure (Booth-Kewley & Thomas, 1993).

Such results are not encouraging given the Navy's interest in developing profiles of QOL needs for different demographic groups. Further analysis of this issue suggests that useful findings might nevertheless be obtained from demographic and similar kinds of data. Several points deserve comment. First, if we consider the complexity and diversity of events and conditions that affect a given person's life, it is understandable that a single fact such as being a male tells us virtually nothing about how that person will evaluate his life. It should not be surprising that aggregating data on males and females results in no differences in average life satisfaction of the two groups.

It is possible that demographic variables can contribute to understanding life satisfaction if they are examined in interaction with one another. To illustrate, the *particular combination* of being 21, female, black, married, and parent of a pre-school child may predict global or domain life satisfaction better than these variables considered independently. If we add contextual information, such as the base or command to which members are assigned, we may be able to account for more of the variance in life satisfaction. Participation in organizational, geographic, political, and informal social units typically entails at least some common experiences for members. And it is through people's interactions in everyday environments that life satisfactions develop. Social unit membership is likely to carry more information about members, the smaller the social unit and the more transactions it imposes on the members. Thus, command data would be expected to be more informative than location data.

In general, the closer that particular combinations of individual and contextual variables come to representing the actual life situations of persons, the better their potential contribution to variance in SQL. At the present state of our knowledge and technology, gains in predictability of SQL are likely to result from using more complex and more sophisticated statistical analyses (Mastekaasa & Moum, 1984). If there were theories that identified the mechanisms by which combinations of demographic factors and contextual factors impact SQL, more powerful analyses could be developed (Chatters and Jackson, 1989, p. 209).

Specific Variables

The individual and contextual variables in Table 1 illustrate categories that could be included in the planned survey of SQL.

Table 1
Illustrative Individual and Contextual Variables

Individual Variables	
Traditional Demographic Variables	
Sex	
Age	
Ethnic group	
Education level	
Variables Relating to Family	
Marital status	
Dependents, including whether they live with the member	
Number and ages of children	
Spouse's employment situation (including whether spouse is in the military)	
Educational levels of parents	
Variables Relating to the Navy	
Paygrade	
Length of time in current paygrade	
Length of time on active duty	
Length of time in current assignment	
Navy career plans	
Term of first enlistment	
Length of sea duty completed	
Ratings	
Navy Enlisted Classifications (primary and secondary)	
Contextual Variables	
Variables Relating to the Navy	
Currently assigned at sea or on shore	
Fleet (if at sea)	
Geographical location of current assignment	
Current assignment (type of ship/activity)	
Current duty station (command)	

Traditional demographic variables are useful for a variety of reasons. Most research on QOL and most military surveys include such data, allowing for comparisons with those databases. Official demographic reports by the Department of Defense include such variables. The Navy has

interests in issues associated with sex, ethnic group, and education. Age is an indicator of a person's life stage, which in turn is associated with QOL needs (Rosenfeld, Culbertson, & Magnusson, 1992).

Research has repeatedly demonstrated the relevance of family variables to SQL. Marriage and children are frequently rated as the most important domains in people's lives (e.g., Gruen, Folkman, & Lazarus, 1988). Increasing percentages of married members in the Navy make family variables particularly relevant to planners and policy makers. Members' obligations to dependents and their concerns about them have implications for all of the military outcomes to be examined, including personal readiness. Employment of spouses affects the standard of living and QOL of Navy families. And the special situation of military couples has both administrative and personal ramifications. Although educational levels of parents is rarely included in research on individual variables, it is relevant to QOL needs. People whose parents have higher levels of education tend to have stronger personal growth needs (Alderfer & Guzzo, 1979).

There are reasons for thinking that individual variables that classify members within the Navy will be related to their QOL. These variables include indicators of members' economic situation, career stage, rate of advancement, and occupational skills—each of which affects one or more of the life domains to be investigated.

Contextual variables identify members in terms of their current placements in functioning Navy units; these variables reflect members' assignments—shore or deployment, fleet, geographic location, type of assignment, command. As noted above, these assignments affect members' daily lives and experiences; their transactions within these placements influence their judgments of QOL.

Life Satisfaction

This section discusses satisfaction with life domains, global life satisfaction, and the relationships between the two.

Satisfaction With Life Domains

Various studies of QOL have identified a number of domains that are important to people. For example, most lists include marriage or other close relationship, job, and housing. The domains that seem most appropriate for a study of QOL in the Navy are shown in Table 2.

Table 2

Life Domains

Marriage or intimate relationship
Children
Friends
Health
Job
Standard of living
Personal development
Housing and neighborhood
Leisure and recreation

Facets of Life Domain Satisfaction

Although lists of life domains such as the one in Table 2 represent areas of concern for substantial numbers of people, no list of 10 or so domains will tap *all* of the concerns of any individual. Nor would everyone report that each item on such a list is a concern to them. People are also likely to differ in their judgments of how relevant their satisfactions in some domains are to their behaviors. For example, some Navy members may consider their satisfaction with their marriage to be quite relevant to their decision to reenlist, while others may see little connection.

Such matters should be taken into account in research on QOL domains. The present conceptual framework incorporates a number of facets of life domain satisfaction, as shown in Table 3. In the following paragraphs, each facet will be defined or described and then illustrated using the domain of housing and neighborhood. In the survey to be conducted, each of the facets applied here to the housing and neighborhood domain would also be applied to each of the other domains.

Table 3

Facets of Life Domain Satisfaction

Particulars of the individual's situation
Satisfaction with aspects of the domain
Overall satisfaction with the domain
Centrality of the domain
Importance
Salience
Comparison with others
Comparison with civilians
Comparison with members in other commands
Perceived influence of the Navy on domain satisfaction
Perceived relevance of the domain to military outcomes

The *particulars of the individual's situation* are the facts that reflect a person's standing with regard to a particular life domain. For the housing and neighborhood domain, relevant facts include: whether the individual lives in military or civilian housing; the type, location, ownership, and size of the housing; amount of rent or mortgage payment; number of people living in the housing unit; proximity to schools, work, and shopping; and character of the neighborhood.

Although the life domains listed in Table 2 are more specific than the concept of global satisfaction, they are nonetheless broad categories. Each domain has numerous aspects with which individuals may be more or less satisfied. The facet, *satisfaction with aspects of the domain*, designates satisfaction at this level. To illustrate, members' satisfactions with each of these aspects of housing and neighborhood might be assessed: privacy, layout, amount of space, appearance, security, location, and proximity to other members of the military.

Besides the more specific evaluations mentioned above, individuals can report their *overall satisfaction with the domain*. These broader judgments should tap how a person evaluates a domain such as housing and neighborhood, taking into account various aspects that might be named, plus, any others that the person considers relevant.

Individuals are likely to differ in terms of how central a given domain is to them. *Centrality of a domain* is considered here to have two aspects: *importance*, or the value an individual places on the domain; and *salience*, or the degree to which the domain is a current concern for the individual. Importance and salience are likely to be highly correlated in some cases but unrelated in others. For example, a person who cares greatly about a marriage that is breaking up would probably rate marriage as both highly important and highly salient. A person in a stable marriage might rate marriage as high in importance but low in salience.

As noted earlier, the importance and salience of a domain are regarded here as variables that help define QOL needs: A need is said to exist if satisfaction with a domain is low and the importance and salience of the domain is high.

In principle, both importance and salience could be applied to aspects of domains (e.g., to privacy, security, and other aspects of housing and neighborhood). However, for the planned research it seems more feasible to apply these concepts to the domains overall (e.g., to housing and neighborhood). To illustrate, an individual about to relocate to a new assignment might attach a great deal of importance to housing and neighborhood and be preoccupied with thoughts about this domain.

People's judgments about their current levels of satisfaction with a domain or with life overall typically are made relative to some other condition or person. Such judgments may be based on comparisons of the present situation with some internal or external standard, such as what one feels he or she deserves, or what other people, such as peers or superiors, have (cf. Argyle, 1987). The comparative standards that most people use in making satisfaction judgments are likely to be somewhat implicit. However, comparisons can be elicited. For example, two *comparisons with others* that appear to be relevant for an analysis of QOL in the Navy are contrasts with civilians and with Navy members in other commands (cf. Wilcove, 1992). To illustrate, members can be asked to evaluate their housing and neighborhood relative to what they might have available to them as civilians or relative to what members in other commands receive.

Most investigations of organizational influences on life satisfactions have examined only one or two domains, or global satisfaction. The present research provides an opportunity to examine this relationship more comprehensively. Given the present attention to a broad set of life domains and the fact that Navy members are the target population, the *perceived influence of the Navy on domain satisfaction* can be examined. A direct, albeit subjective, measure of this influence can be obtained for each domain. For example, members can be asked the extent to which they regard the Navy as responsible for their level of satisfaction with their housing and neighborhood.

Another link that can be examined in the planned research is the relationship between domain satisfaction and specific military outcomes such as retention and job performance. Here we will consider only the subjective aspect of this relationship, namely the *perceived relevance of the domain to military outcomes*. This variable reflects the extent to which individuals believe their actions, such as reenlistment and job performance, are due to how they feel about a particular domain. By including this variable, we are recognizing that individuals may differ in their assessments of how relevant a domain is to a particular outcome. For example, some members may regard housing and neighborhood as important factors in decisions to reenlist, while others may not.

Spouses' Views of Life Domains

Although there are good reasons for thinking that much of the time both members of a marriage or intimate relationship will have similar views about important life domains, there are enough exceptions to make it worthwhile to obtain information about spouses' views. Substantial proportions of Navy members are married: 49% of enlisted personnel and 66% of officers (Office of the Assistant Secretary of Defense for Force Management and Personnel, 1991, pp. 53, B-43). Present plans for the Navy SQL survey do not call for surveys of spouses. However, questions about spouses' views could be included in surveys of members. Specifically, it seems appropriate to ask members to report their spouse's satisfaction with each domain and with the aspects of each domain, and the importance the spouse attaches to each domain.

Global Life Satisfaction

The concept *global life satisfaction* refers to an individual's assessment of his or her overall QOL. There are numerous scales for measuring this concept. The simplest ones consist of a single item such as "How satisfied are you with your life as a whole?" and "On the whole how satisfied are you with the life you lead?". Both single item and more complex scales of global satisfaction attempt to capture general feelings about life. The multi-item scales include a number of general questions; they do not ask about a series of life domains (Andrews & Robinson, 1991).

Comparisons of Global and Domain Satisfaction

Conceptual Comparisons

The question of whether SQL is best thought of in terms of global satisfaction or in terms of satisfaction with life domains cannot be answered in general. Subjective QOL is an abstract concept, a convenient fiction, that researchers, policy makers, and others use to summarize the reported satisfactions of people. At the conceptual level, then, any of a number of plausible definitions of SQL might be used. Researchers and theorists may define concepts as they see fit; they then have the burden of demonstrating the value of their definitions.

Although many researchers have assumed that SQL is best represented as a global, general feeling of life satisfaction, a case can be made for an alternative conception. SQL can also be represented as the individual's satisfaction with the relatively few life domains that are most central (important and/or salient) to him or her. This alternative view is consistent with the fact that people have limited attentional capacities and tendencies. Most likely, at any given time, people are primarily concerned with a small number of life domains—perhaps only one or a few. Arguably, life satisfaction is reasonably represented by these salient domains.

The point of raising this issue is not to endorse a domain-based definition of SQL, but to point out a plausible alternative to the global conception. Further contrasts between global and domain-based approaches to SQL are discussed in the following paragraphs.

Comparisons of Utility

Researchers of SQL frequently aggregate respondents' satisfactions with various life domains and then correlate these aggregated scores with the respondents' reported global satisfaction. They generally find that aggregated domain satisfactions correlate positively with global satisfaction,

typically accounting for 40-60% of the variance in the global measure. Researchers also report that when they weight people's satisfactions in various domains according to how important the people say the domain is, the resulting scores do not correlate with global satisfaction more highly than scores based on unweighted satisfactions (Andrews & Robinson, 1991, p. 69). In other words, taking into account the importance that people assign to domains usually does not increase the predictability of their overall life satisfaction.

Such analyses seem to be based on an assumption that global measures are the most valid indicators of life satisfaction. That is, global measures seem to be regarded as appropriate criteria against which to judge the adequacy of measures of domain satisfaction.

It is more appropriate, however, to regard global and domain measures as distinct variables whose utilities vary according to their applications. The simplicity of global measures, which yield a single score to represent overall life satisfaction, can be a virtue. They are convenient summary measures for contrasting subgroups within an investigation or for comparing across investigations.

Global measures are less useful than domain measures for policy-relevant research and for needs analyses, however. Knowing that one group is less satisfied with life as a whole than another group has few implications for action, except to seek more information. In contrast, findings such as the following have more utility: members of a group are generally dissatisfied with their work, which they regard as important and which they think about often; and most of the dissatisfaction centers on supervision. Such a finding indicates a fairly specific need and it directs the attention of policy-makers to particular issues.

Utility of the two conceptions can also be examined in terms of how strongly each of them is related to organizational outcomes. Direct empirical tests are the best way to establish this. Such tests will be conducted in the planned research. However, there are *a priori* reasons for thinking that some domain measures will be more closely related to the outcomes of interest here. By definition, global life satisfaction is an abstract concept that has no specific or concrete referents. When people reflect on their life as a whole, they are free to think about any of a vast number of experiences, conditions, and time periods. For example, some people may think mainly of their standard of living now compared to when they were growing up; others may think of their present enjoyment of family or friends. Some may reflect on several domains of life; others may be so caught up in their current concerns with one domain that they generalize it to life overall. This inherent ambiguity probably accounts for the finding that measures of global life satisfaction are typically less reliable than measures of satisfaction with particular life domains (Kerce, 1992). Measures with low reliabilities tend to have weak relationships with other measures; thus, global measures are unlikely to account for as much variance in measures of organizational outcomes as domain measures.

There are further reasons to expect that measures of at least some domains will be better indicators of military outcomes than global measures. These reasons have to do with the similarity of content of satisfaction and outcome measures, and with the presumed set of events that produce the outcomes, as discussed in the following paragraphs.

As noted earlier, global satisfaction measures do not focus respondents' attention on particular aspects of their lives, but domain measures do. Some of the domains to be included in the planned research are similar in content to the outcomes of interest. For example, at the conceptual level, satisfactions with work and with aspects of work are in the same sphere as job performance. At the

operational level, questions about the various facets of the work domain (see Table 3) will direct respondents' attention to various particulars of their work, just as will questions about job performance, an outcome. The more similar the content of two measures that are correlated, the stronger their relationship is likely to be (McGrath and Altman, 1966). Thus measures of satisfaction with work and with particular aspects of work are likely to be more closely related to job performance than are measures of satisfaction with other domains or with life overall.

The organizational outcomes of interest in the present research (e.g., job performance and decisions to reenlist) are undoubtedly the result of a complex interplay of factors—such outcomes cannot be accounted for by any single variable. Theories that include facets of life domains may be found or formulated to “explain” or account for these outcomes (cf. Lipsey & Pollard, 1989). If such theories are regarded as plausible by knowledgeable people, either because of the theories' internal features or because they are supported by data, they give us additional reasons for thinking that those facets of life domains will be related to the outcomes. To illustrate, theories that link concepts within the same general sphere (e.g., work satisfaction and job performance) are generally more plausible than theories that link more divergent concepts (e.g., satisfaction with life as a whole and job performance). Within-sphere theories, generally present smaller, more differentiated steps in the presumed casual process that links the concepts of interest (cf. Lipsey, 1990). A number of QOL variables found by researchers to be related to military outcomes are noted in the review of Glaser and Dutcher (1994).

Although the above considerations lead to higher expectations for domain satisfaction measures than for global measures, empirical research is the best way to evaluate their relative contributions, as noted earlier. The discussion makes clear the need to include both types of measures in the planned studies.

Additional Considerations: Recent Events, Person-Environment Fit, and Personal Dispositions

This section introduces three additional considerations that were not included in the simplified sketch of the conceptual framework presented in Figure 1: recent events in people's lives, the fit of persons with their organizational environments, and personal dispositions. The relevance of each to SQL is discussed below.

Recent Events

The life satisfactions that people report are presumably based on their accumulated experiences. However, we know very little about the particular transactions in people's daily lives that lead them to report a given level of satisfaction or dissatisfaction. Two recent reviewers of a portion of the SQL literature have called for research to “ground (SQL) evaluations in life circumstances,” including people's “reactions to discrete occurrences, such as stressful life events, natural disasters, and personal problems” (Chatters & Jackson, 1989).

One research program on psychological stress has examined daily events that produce irritations and provide psychological “boosts” to people. Although this research has not been linked to SQL, it is potentially quite relevant. Richard Lazarus, the director of the research program at the University of California, Berkeley, conceptualizes stress as arising out of “the continual

interplay between the person and the environment" (Lazarus, 1990, p. 4). The following discussion draws very selectively from this work. Lazarus (1990) presents a fuller introduction.

In an attempt to capture some of the dynamics of the stress process, Lazarus and his colleagues have developed the Hassles and Uplifts Scale (DeLongis, Folkman, & Lazarus, 1988). The scale consists of 53 words or phrases that represent potential sources of irritation or pleasure, for example: "your spouse," "the nature or your work," and "enough money for necessities." Respondents are asked to indicate whether, and to what extent, each item was for them: a "hassle" or an "uplift" on the particular day that they complete the scale. By focusing their inquiry on concrete events that occurred within the immediate past ("today"), Lazarus and his associates attempt to tap into actual transactions in the stress process. Lazarus advocates repeated administrations of the scale to obtain a more accurate estimate of the stress that a person experiences over time (Lazarus, 1990, p. 11; DeLongis, Folkman, & Lazarus, 1988).

If levels of life satisfaction, like levels of stress, are the result of transactions in people's everyday lives, it may be possible to capture something of the process by which satisfactions develop by creating a modified version of the Hassles and Uplifts scale.¹ The first step could be to identify, for each of the life domains to be included in the planned research, three or four potential sources of satisfaction or dissatisfaction. Within the domain of housing and neighborhood, for example, such sources might include "your house or apartment," "your neighbors," and "the environment where you live (e.g., air quality, noise level, safety, greenery)" (the last item is a variation of an item in the Hassles and Uplifts scale). The format could allow respondents to indicate separately for each item, degrees of satisfaction and degrees of dissatisfaction, just as both hassles and uplifts are asked about in the original scale. Or perhaps the questions concerning hassles and uplifts could be retained on the assumption that they translate rather directly into satisfactions and dissatisfactions. A few of the items in the original scale, such as "your spouse," could be retained. The modified scale would cover life domains more systematically than the original scale, which has, for example, seven items related to health, but only two related to housing and neighborhood. The time frame specified on the revised scale might more appropriately be the past week, rather than the day the scale is administered, since repeated administrations would not be feasible.

The modified scale would have subscales of three or four items for each of the life domains of interest. Conceptually these subscales represent an attempt to sample the respondent's recent transactions that are relevant to satisfaction in the various life domains. Responses to these subscales could be related to one another, to the life domain facets listed in Table 3, to overall life satisfaction and to organizational outcomes.

The format suggested above could also be used to learn more about how particular aspects of Navy life affect respondents. A broad range of items could be included, such as "my command," "uniform regulations," and "inspections."

¹The following ideas for scaling recent events related to satisfactions are the result of a collaboration with Elyse W. Kerce.

Person-Environment Fit

The degree to which members experience hassles and uplifts from Navy life may be due in part to how well members' personal qualities match the demands and opportunities that characterize the behavior settings they occupy. Behavior settings are small-scale social environments such as workplaces, recreational facilities, training classes, mess halls (cf. Wicker, 1972, 1984). If there is a close match of abilities, interests, and motives of a person with the program of a behavior setting (i.e., if the setting engages members in ways that allow them to use their skills and abilities, and to participate in ways that interest them and that satisfy their motives) there is a good *person-setting fit*. If a person enjoys a good fit with most of the behavior settings he or she encounters on a daily or weekly basis, we can speak more generally of a close *person-environment fit*.

The concept of person-environment fit has been widely applied—to citizens and the communities where they reside, to workers and their jobs and employing organizations, to students and the schools they attend—in an attempt to account for people's satisfactions, stresses, and behaviors such as performance and attrition (Furnham & Schaeffer, 1984; Hampton, 1991; Spokane, 1987; Zautra & Goodhart, 1979). Typically, in research on this topic, investigators obtain separate measurements of persons and of their environments—from these measures they calculate degree of fit. In the planned research, however, a simpler, more direct approach seems preferable. Navy members could be asked to make their own assessment of how well their abilities, interests, and personal needs are suited to Navy life. Married members could also be asked to make the same assessment of their spouse and of their children. Although such an approach would be a rather superficial attempt to deal with a complex concept, it would permit a preliminary assessment of the concept's relevance to SQL and to organizational outcomes in the Navy.

Personal Dispositions

Personality factors may also play an independent role in people's assessments of QOL. That is, certain enduring characteristics of people may influence how they interpret events and situations. For example, intuitively at least, it seems reasonable to expect that people who are generally optimistic would report higher satisfaction with their lives and life domains than people who are generally pessimistic in their outlook.

Researchers have examined the relationships of a number of personality trait measures with measures of SQL, happiness, and subjective well being. No single trait accounts for large amounts of the variance in these satisfaction measures, although some traits seem to be consistently related to them. For example, self-esteem, extraversion, and optimism are frequently found to be positively related to life satisfaction; neuroticism, negatively related (Andrews & Robinson, 1991, pp. 68-68; Diener, 1984, pp. 558-560). A recent pilot study of Navy enlisted personnel yielded similar results. For example, of six personality trait measures, neuroticism had the strongest relationship with SQL, accounting for 14% of the variance in a composite of global life satisfaction measures (Booth-Kewley & Thomas, 1993).

If personality measures are to be included in the forthcoming study of SQL among naval personnel, reasonable choices would be brief scales of neuroticism (which would include questions about feeling tense, anxious, sad, and being easily discouraged) and/or optimism (Costa & McCrae, 1980, 1988; Scheier & Carver, 1985).

Military Outcomes

A distinctive feature of the planned research is its examination of the relationship between SQL and events that affect the Navy's ability to carry out its mission, that is, military outcomes. A review of the literature on some of these outcomes was recently prepared by Glaser and Dutcher (1994).

The following outcomes are considered here: retention (including both the completion of current enlistment and reenlistment), job performance, and personal readiness. Actions by Navy members determine these outcomes, which may be directly influenced by QOL in the Navy. Recruitment, which is also frequently listed among desired military outcomes, is not considered here. Initial enlistment is an action by civilians; the antecedents of this action do not usually include direct experience with the Navy. Recruits will be the target of a separate study within the present project.

Two distinctions are useful in designating the outcomes to be considered here: person-level versus organization-level outcomes and objective versus subjective outcome indicators. The present concern is with *personal outcomes*—that is, individual actions that have implications for the Navy, such as how well members perform their particular job assignments. Organizational outcomes, in contrast, are the result of the actions of a group or larger unit, such as how effectively the unit carries out its mission. Personal outcomes are more appropriately linked with SQL measures, which also reflect person-level concepts.

The other distinction has to do with how personal outcomes are assessed. Objectivity and subjectivity of measures should be thought of as relative terms, rather than as absolute qualities. Some measures can be described as relatively "factual" or "objective"—their meaning is evident to most observers. An example would be the act of reenlisting. This action has a fairly clear meaning: it has obvious implications for those who do it, it is accompanied by paperwork and other traces that can be used to verify the event, and it occurs in a discrete and fairly brief time frame. Other measures are more subjective—they are influenced by personal interpretations, and are less verifiable by others. A member's intention to reenlist is relatively subjective—it cannot be so easily verified by other people.

Given that no measure is perfect, and that measures differ in their strengths and weaknesses, researchers should employ multiple, diverse indicators for the variables that interest them whenever it is feasible to do so. In the planned research, it would be advisable to include both objective and subjective measures for at least some of the outcomes. These and other issues related to personal outcomes are discussed in the following paragraphs.

Retention

Historically, it has generally been in the Navy's interest for members to complete the periods of their enlistments and to reenlist for additional tours of duty. Recent international and domestic events, however, have led to plans to reduce the number of men and women in military service. Programs, now in place, encourage certain members in good standing to leave the Navy before completing their obligated tours of duty. And reenlistment may no longer be an option for many members. In spite of these developments, however, the Navy is likely to continue to regard a

willingness to complete one's enlistment and a desire to reenlist as positive outcomes, particularly in the case of outstanding performers and those who have critically needed skills.

Attrition (separation from the Navy before one's obligation has been fulfilled) may occur for a variety of reasons. Most members who attrite probably do not plan to do so, but are caught up in circumstances over which they have little control. In terms of both practice and Navy values, completing a tour of duty is the norm. For these reasons, the more objective measure of actual separation from the Navy seems a better indicator of attrition than responses to questions about intentions to leave before one's period of obligation. However, given possible additional programs associated with downsizing, it would make sense to include in a survey, questions about whether members would be inclined to leave before their enlistment period if the Navy offered them that opportunity.

The other facet of retention is reenlistment. The circumstances relating to this action are rather different from attrition, and there are different implications for measurement. At the time of an enlistment, members commit themselves to serve a fixed period of time. They expect to make a choice at the end of that contractual period. Because this is the usual state of affairs, members are surely at least somewhat playful about reenlistments, and questions about their intentions in this regard seem more appropriate. However, given the possibility that fewer positions will be available, a conditional question (e.g., "if given the opportunity, do you plan to reenlist?") may be in order. An additional advantage of measures of intent is that they can be obtained from any member at any time, while for a given member, reenlistment occurs only every few years. Of course, data on actual reenlistments should also be obtained. But to the extent that members are not given the opportunity to reenlist, the objective indicator will be less suitable for correlating with SQL measures than conditional intentions.

Job Performance

In some ways, job performance and personal readiness, which is discussed later, are the most important of the outcomes considered here. How well members perform their assigned duties and how prepared they are for deployment determine how successful Navy units will be in carrying out their missions. Although both of these outcomes are likely to be affected by downsizing, they are important regardless of the eventual size and configuration of the Navy. Moreover, in contrast to retention outcomes, job performance and readiness are displayed in everyday actions and situations.

The importance of job performance has long been recognized by industrial and organizational psychologists, who have extensively studied ways of assessing how well workers perform. A great deal has been learned about performance appraisal from these efforts, including the fact that there is no universally acceptable and applicable measure or strategy. Relatively objective measures of performance (e.g., number of units produced) are difficult to conceive and develop for most jobs. And given the diversity of jobs that exist, no general objective measure is possible. Ratings by supervisors and peers are subjective, in the sense that they reflect personal judgments. Self-appraisals are often regarded as even more subjective, because leniency, defensiveness, and other biases may affect them. People rating themselves have more, and apparently more differentiated, information about themselves than observers (supervisors, peers) have about them (cf. McEnery & McEnery, 1987). However, supervisors and peers agree more about incumbents' work performance than the incumbents agree with either type of observer. Typically, self-ratings are higher than observers' ratings (Harris & Schaubroeck, 1988).

These and other findings have implications for measurement of job performance in the planned research. The literature indicates, for example, that relative ratings tend to be more valid than absolute ratings. A recent meta-analysis of the relationship between supervisors' ratings and objective measures of performance revealed that rating formats which ask the rater to compare a target person with a peer yield stronger correlations with objective measures than formats in which the target person is rated according to an absolute standard (Heneman, 1986). Similarly, self-ratings of ability are more accurate when respondents are asked to compare themselves with others, such as peers, than when they are asked to rate themselves on an absolute scale (Mabe & West, 1982). Other research indicates that when people have an opportunity to compare their own work products with the products of other workers, they give more valid self-ratings than when they have no opportunity to examine others' work (Farh & Dobbins, 1989). An additional factor that increases the validity of self-report measures is assurance of anonymity (Mabe & West, 1982).

In the forthcoming SQL survey, job performance should be assessed by self-report, using one or more questions that ask respondents to rate their overall performance or aspects of their performance in relation to specific others (e.g., their co-workers, others with their rating or NEC, or others who have similar training or experience). The assurance of confidentiality is a standard procedure with Navy surveys; this feature could increase the validity of self-reports of job performance.

In addition to self report measures, the planned research might also include Navy performance appraisals of respondents. An earlier report has noted problems with these appraisals, including their lack of variability (nearly everyone is evaluated highly), uniformity (different types of forms are used for officers and enlisted personnel), and ready accessibility (there is no central source for appraisal data on members in lower rates) (Glaser & Dutcher, 1994). However, before this additional source of job performance data is rejected, its suitability should again be assessed; supervisors' ratings represent another type of measure that is not highly correlated with self ratings. It is not clear, for example, that there is no variability in the appraisals; directions for completing the Navy's rating forms require raters to discriminate among those who are rated highly. At the very least, members who participate in a survey could be asked to report the results of their last official performance review.

Personal Readiness

Apparently, most discussions of naval readiness concern organization-level readiness, such as how promptly and effectively units can respond to assignments on short notice. The present focus is readiness at the person level, for example, how prepared individual members are to respond to deployments and to participate effectively as team members in dealing with urgent needs.

There has been relatively little research on personal readiness in the Navy, or in the military. The Army leads the services in recent research, particularly in studies of the influence of family situations on readiness (Burnam, Meredith, Sherbourne, Valdez, & Vernez, 1992; Pliske, 1988; Sadacca, McCloy, & DiFazio, in process, a, b). In recognition of the underdeveloped state of research on this topic, a separate component of the present project is to develop a self-report measure of personal readiness. Because others will be working on that task, independent of the present effort, only a few general comments are given here.

The task of developing a measure of personal readiness seems fairly straightforward. An early step is to formulate a conceptual definition, a statement in abstract terms of how personal readiness can reasonably be construed—what are its various aspects, what it includes and by implication, what it excludes. The task is not, as some might imagine, finding out “what personal readiness really is.” Like SQL, personal readiness is an abstraction or convenient fiction—it has no concrete reality that can be discovered. Rather, a definition must be formulated. Different people who talk or think about personal readiness probably would agree only partially about what the term means. It is useful for the researcher to learn about these conceptions by reviewing the research and other literature on the topic and by talking with knowledgeable people. The researcher must then decide what constitutes a suitable definition. This definition can be reviewed and commented upon by others, and possibly revised on the basis of the feedback. Ideally the definition will reflect much of what informed people already understand by the concept, as well as other aspects that they can agree are appropriate, but about which they had not previously thought.

The advantage of formulating such a conceptual definition is the guidance it provides in developing of a measure of personal readiness. In this step, questions or other indicators would be devised or found to reflect all of the aspects of the concept. To illustrate, suppose that a definition of personal readiness included the following aspects: being available to respond, having the capacity to perform one’s essential job functions efficiently, ability and motivation to work as a team member, being mentally and physically prepared to respond to the demands of a sudden deployment, and having organized one’s personal affairs and prepared one’s family for the eventuality of a departure on short notice. Questions or other measures would be devised to tap each aspect. For example, the aspect, performing job functions efficiently, might be examined by asking respondents how competent they feel in carrying out their duties, how recently they have performed essential tasks, how adequate their training is for what they might be asked to do, and so on. In addition to self-report items, measures might include job knowledge tests, supervisors’ ratings of personal readiness, performance scores on drills, spouses’ reports of family preparations, and the like (cf. Bell, 1992).

The Expanded Conceptual Framework

The elaborations of the conceptual framework discussed on the preceding pages are represented in Figure 2, which shows a more complete version of the framework.

Most of the relationships in Figure 2 have already been discussed. To summarize, individual and contextual factors are represented as contributing to the variance of both global and domain satisfaction. These satisfaction variables are expected to be related to one another, and each is shown as contributing to military outcomes. (The moderating effects of individual and contextual factors on the relationships between life satisfactions and military outcomes, that were shown in Figure 1 as dashed lines, have been left out of Figure 2 for greater simplicity.)

Figure 2 includes the three additional variables that have been discussed as additional influences on life satisfactions: recent events (positive and negative experiences within each of the domains and with regard to Navy life), person-environment fit (how well personal attributes fit the demands and opportunities of the Navy environment), and personal dispositions (certain enduring personality characteristics). Each of these variables is shown as contributing both to global and to domain satisfactions. In addition, person-environment fit is represented as having a direct influence on military outcomes, as was suggested earlier.

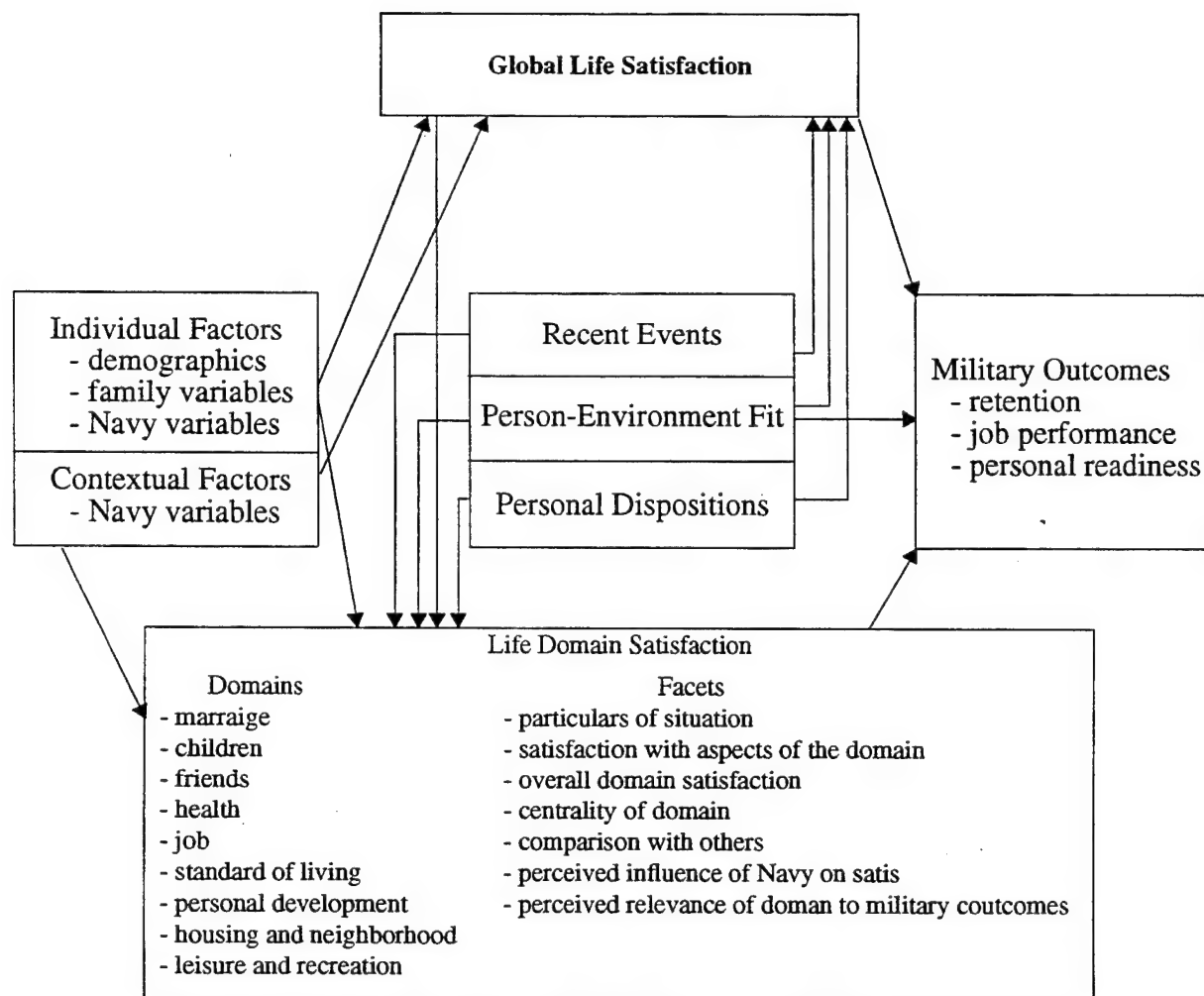


Figure 2. The conceptual framework.

Some Specific Expectations

If the planned research follows the guidelines suggested here, that is, if measures are developed or chosen to reflect the variables in the conceptual framework, and if these measures are used in a Navy SQL survey, a large number of analyses could be conducted from the resulting data. Generally speaking, the best guides to data analysis are expectations derived from theories or conceptual frameworks based on research literature on a topic. A number of such expectations are stated below. They illustrate, but certainly do not exhaust, issues that can be examined in the planned research.

1. Individual and contextual factors will have relatively weak relationships with global and life domain satisfactions. These relationships will be stronger when combinations of factors (including both main and interactive effects) are included in the analysis.

2. Contextual factors that are based on membership in relatively small, functional units will be more strongly related to global and life domain satisfactions than individual factors or contextual factors based on large units.

3. Global life satisfaction will be more strongly related to a composite of life domain satisfactions that is weighted by salience than to an unweighted domain composite or to a domain composite weighted by importance.

4. The following variables will make independent contributions to overall domain satisfaction: the particulars of the situation, satisfactions with aspects of the domain, and recent experiences of satisfaction or dissatisfaction within the domain (recent events scale).

5. Global life satisfaction will be less strongly related to military outcomes than a composite of satisfactions with life domains.

6. A multiplicative model composed of the following factors should account for a significant amount of the variance in specific military outcomes: overall domain satisfaction, centrality of the domain, and relevance of the domain to the outcome. According to this model, outcomes are predicted to be most favorable (stronger intention to reenlist, better job performance, higher degree of personal readiness) when, for a given domain, the member's satisfaction is high and the domain is important and/or salient to the member and the domain is perceived as relevant to the outcome. If either of the latter two predictive elements is low, that is, unless a person sees the domain as central and relevant to the outcome, satisfaction with the domain won't contribute much to the outcome. For example, satisfaction with one's marriage will contribute to job performance only if one regards the marriage as important (or is preoccupied with it) and if one sees a connection between the marriage and the work.

7. Members' assessments of how well their own personal characteristics and the characteristics of their dependents match the requirements of Navy life (person-environment fit) will be more strongly related to military outcomes than will measures of global or domain satisfaction. Person-environment fit will correlate with military outcomes in this order: intention to reenlist (strongest relationship), personal readiness, and job performance.

Concluding Comment

The planned survey of Navy members should contribute to knowledge of the factors that influence life satisfactions and military outcomes. It should provide valuable baseline data on how members are experiencing life, what their QOL needs are, and their standing on outcomes important to the Navy. Such data should prove useful to human resource planners and decision-makers in the current transitional period for the Navy. If paired with sound predictions of the demographic composition of the Navy in the future, projections could be made of needs of members for subsequent years.

Recommendations

Numerous suggestions have been made in this report for the planned study of subjective QOL among Navy personnel. Some of the major suggestions are summarized below.

1. The QOL survey should be based on an explicit conceptual framework such as the one presented in this report.

2. The contributions of individual variables and contextual variables to subjective QOL should be examined. Individual variables should include traditional demographic variables (e.g., age and sex), family-related variables (e.g., number of dependents), and Navy-related variables (e.g., paygrade). Contextual variables should include members' Navy assignments, such as location of current duty.

3. If the Navy sponsor of this project intends to obtain projections of the demographic composition of the Navy at certain times in the future, the individual variables that are represented in those projections should be included in the forthcoming survey. The variables used in the projections should precisely match or be directly translatable into variables in the survey. Such a matching is essential if survey data and demographic projections are to be merged in a predictive model of QOL needs.

4. Although the planned survey will emphasize subjective aspects of QOL and will employ self-reports of military outcomes, wherever it is feasible to do so, relevant objective data from Navy records and possibly from other sources should be also be obtained and included in analyses.

5. In the present conceptual framework, life domains are portrayed as having a number of facets. The forthcoming survey should include measures of each facet for each domain in order to permit tests of various expectations derived from the framework.

6. The relationship of global life satisfaction with the variables reflecting facets of life domain satisfaction should be examined.

7. Measures of the following variables should be included in the survey: satisfying and dissatisfying recent events, perceived fit of oneself with the Navy environment, and personality traits such as optimism. The contribution of these variables to measures of subjective QOL should be examined.

8. A variety of ways of combining survey and other data to predict military outcomes should be explored. The analyses should include examination of a model that represents outcomes as a function of domain satisfaction, centrality of the domain, and perceived relevance of the domain to the outcome.

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